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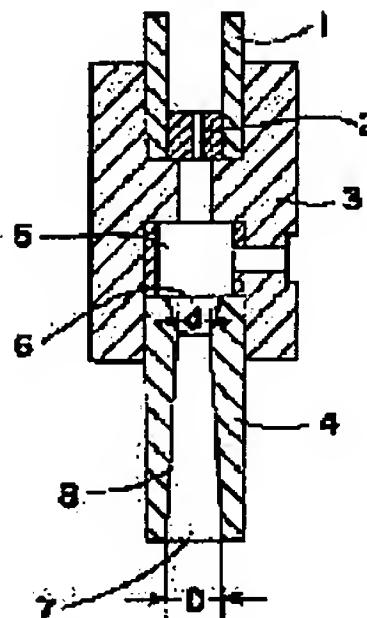
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(54) NOZZLE ASSEMBLY FOR ABRASIVE WATER JET

(57)Abstract:

PURPOSE: To reduce fluid friction and improve grinding efficiency by forming the main inner face part on the outlet of a mixing and accelerating conduit, which mixes abrasive material in a high velocity jet stream and accelerates it to form a grinding fluid jet stream, to be enlarged gradually toward the outlet.

CONSTITUTION: The divergent part 8 is formed by enlarging the inner dia. on the inner wall face of a mixing and accelerating conduit 4 straightly toward the outlet 7 after contracted once at the inlet 6. Such a divergent form smoothes the transmission of momentum in an abrasive material accelerating process. Also, the acceleration and diffusion of a jet stream are performed at the same time. The minimum dia. on the inlet of the mixing and accelerating conduit 4 is 1.1 times the dia. of a high velocity jet stream and at least 1.1 times the maximum dia. of grinding grains. The main part tending from the minimum dia. portion to the outlet 7 has the inner dia. gradually enlarged up to twice in area and the length set 20-100 times the dia. of the inlet 6.



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